

LIST OF CURRENT CLAIMS

1. (Previously Presented) Method for adjusting a compressed air installation with several compressors, said installation comprising two or more electrically driven compressors of the kind known as any of the designations: 'loaded/unloaded' compressor; turbo compressor; and variable rotational speed compressor, said compressors being connected to a single compressed air network via respective outlets thereof, and wherein each compressor is provided with at least one control unit, and further wherein a control box to which is connected a pressure sensor comprising part of said compressed air network is used, the method comprising:

using said control box to adjust the pressure in said compressed air network relative to a settable target pressure and within a pressure range which is limited by a minimum pressure to be set and a maximum pressure to be set, and wherein the adjustment takes place by controlling the flow of one or more of the two or more compressors in order to increase the overall flow supplied by the compressors when the pressure drops below a first desired level, and in order to lower the overall supplied flow when the pressure exceeds a second desired level; and

storing an evaluation table in a memory of the control box beforehand for every compressor or for every type of compressor of the compressed air installation, such that for every working condition of the respective compressor, the influence of a control order is assessed, and such that for every control order of the compressor concerned, a score is given which is positive when the influence of said order is favourable to the output of the compressed air installation, and which is negative when the influence is unfavourable, and whose absolute value increases as the favourable or unfavourable influence increases.

2. (Currently Amended) Method according to claim 1, wherein the control box controls the overall flow of the compressed air installation by providing at least one given control

order to the control unit of one or more of the two or more compressors, which given control order or given control orders may include one or more orders selected from the group consisting of starting and/or stopping one or more of the two or more compressors; opening or closing a controlled inlet valve of one or more of the two or more compressors; opening or closing an exhaust valve of one or more of the two or more compressors to a greater or lesser degree; and adjusting a rotational speed of one or more of the two or more compressors.

3. (Canceled)

4. (Canceled)

5. (Previously Presented) Method according to claim 1, wherein, while the compressed air installation is operational, in order to select a most favourable control order as determined by the scores assigned to the control orders, the scores of all positive control orders which can direct the overall flow in the required direction in order to bring the pressure in the compressed air network closer to the set target pressure, can be mutually compared by an algorithm, either periodically or continuously, after which the control order having the highest score assigned thereto is implemented.

6. (Previously Presented) Method according to claim 5, wherein the algorithm, when selecting the most favourable control order, also takes into account the overall score of combined control orders of one or several compressors which can direct the overall flow in the required direction, such that the control order or combined control order having the highest score is subsequently carried out.

7. (Previously Presented) Method according to claim 5, wherein in order to select the most favourable control order, the scores of the control orders are increased by a value which is equal to the difference between a supplied flow and a required flow after a hypothetical implementation of the control order concerned, multiplied by a negative weighing factor whose absolute value is bigger in the case where said difference is positive than in the case where said difference is negative.

8. (Previously Presented) Method according to claim 5, wherein in order to select the most favourable control order, the scores of the control orders are increased by a value which is equal to the difference between a supplied flow before the control order and a hypothetically supplied flow following the control order, multiplied by a negative weighing factor.

9. (Previously Presented) Method according to claim 5, wherein if an even wear is required for all the compressors, a value is added to the scores which is equal to the number of working hours of each respective compressor, multiplied by a negative weighing factor.

10. (Previously Presented) Method according to claim 5, wherein if a forced priority for starting the compressors is required, a starting priority is accorded to the compressors which is added to the above-mentioned scores after multiplication with a negative weighing factor.

11. (Previously Presented) Method according to claim 5, wherein if a low selection priority is required for a compressor, a positive value will be subtracted from the scores of the low selection priority compressor.

12. (Currently Amended) Control box for adjusting the compressed air installation comprising two or more compressors according to the method of claim 1, said control box comprising: connections to the at least one control unit of each compressor and to the pressure sensor of the compressed air installation, wherein said control box adjusts the pressure in said compressed air network relative to the settable target pressure and within the pressure range which is limited by the minimum pressure to be set and the maximum pressure to be set, and wherein the adjustment takes place by controlling the flow of one or more of the two or more compressors in order to increase the overall flow supplied by the compressors when the pressure drops below the first desired level, and in order to lower the overall supplied flow when the pressure exceeds the second desired level, and wherein the evaluation table is stored in the memory of the control box beforehand for every compressor or for every type of compressor of the compressed air installation, such that for every working condition of the respective compressor, the influence of the control order is assessed, and such that for every control order of the compressor concerned, the score that is given is positive when the influence of said order is favourable to the output of the compressed air installation, and is negative when the influence is unfavourable, and wherein the absolute value increases as the favourable or unfavourable influence increases; and an arithmetic unit with an algorithm which enables comparison between said given scores and to provide a given control order as a function of a highest selected score.

13. (Previously Presented) Compressed air installation for carrying out the method according to claim 1, comprising two or more compressors selected from the group of compressor types consisting of 'loaded/unloaded' compressor; turbo compressor; and variable rotational speed compressor, wherein the compressors are each connected to the single compressed air network via respective outlets thereof, and wherein each compressor is provided with the one or several control units; the pressure sensor; and the

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control box which is connected to one or several of the control units and to the pressure sensor.